MODIS TECHNICAL TEAM MEETING

March 18, 1999

Vince Salomonson chaired the MODIS Technical Team Meeting. Present were Bill Barnes, Barbara Conboy, Mark Domen (PM Project), Al Fleig, Bruce Guenther, Dorothy Hall, Chris Justice, Steve Kempler (GDAAC), Michael King, Gene Legg (NOAA), Ed Masuoka, and Eric Vermote, with Mike Heney taking the minutes.

1.0 SCHEDULE OF EVENTS

MODLAND/SDST Meeting (GSFC)	March 30–31, 1999 Building 28, Room E210
Oceans Meeting (Miami, FL)	April 12–13,1999
PI Processing Meeting (GSFC)	April 14, 1999, 9:30 a.m. Building 28, Room E210
Next MODIS Science Team Meeting Greenbelt Marriott Hotel	May 4–5, 1999
PI Processing Meeting (GSFC)	May 12, 1999, 9:30 a.m. Building 28, Room E210
SAFARI Validation/Coordination Meeting (Boulder, CO)	May 12–14, 1999
Mini-SWAMP Meeting at EOS-IWG (Vail, CO)	June 15–17, 1999
SAFARI Program Implementation Meeting (Gabarone, Botswana)	July 26–30, 1999

2.0 MINUTES OF THE MEETING

2.1 Software Report

Vermote gave a summary of the March 17 PI Processing meeting. He noted that MODAPS is making progress, and is keeping even with PI Processing development. Everything seems to be under control internally, the concerns are external. The primary concerns are the lack of a complete End-to-End (E-T-E) test from ground station to end-user before launch and a concern about the number of workarounds required and the burden they put on the MODIS team. A MODAPS E-T-E test is being planned that was described as an "early-middle to late-middle" production test.

A more complete test is not possible because ECS is not available, but it is still a good test to do.

The concerns about workarounds are related to the fact that they will require testing and validating the system first with workarounds and then later with the production system. There is also a concern that implementing workarounds will reduce the incentive for ECS to deliver their components on schedule.

The SIPS interface, which is the authenticated way to get data from MODAPS into the DAAC, will not be ready until after launch. The DAAC has a workaround that will handle about 25 to 30% of the total data load. Since MODAPS will only be producing 50% of the data products early on, this is an acceptable volume for the workaround. Justice noted that the data users will have a learning curve for dealing with data formats and other issues, and that a small amount of data reaching end-users will go a long way.

2.2 Snow and Ice Report

Hall reported that she had not yet been able to get the snow/ice algorithm working on NOAA-15 data due to format difficulties with NOAA data. At this point, data are not yet being ingested into the algorithm.

2.3 MAST Report

Conboy noted that the next MODIS Science Team Meeting will take place May 4–5 at the Greenbelt Marriott. This is during the GSFC 40th anniversary week.

2.4 MCST Report

Guenther reported that the Level 1 algorithm will be "up to snuff" at launch, and will get better as time goes on. MCST will not be able to do all the testing they desired, due to a delay in installing a T3 data line from the Goddard DAAC to 7501 Forbes Road. The initial plan had the line going in by February 01, but administrative holdups will delay this to as late as May 01. Guenther noted that the process of improving transient response and light leaks in high-contrast scenes might take a couple months to evolve as they learn how to handle the problem. The expectation is that the correction may be able to be applied to about 10 scenes per day; it is not yet known what the processing load for applying the correction will be.

Justice inquired whether a QA plan for L1B was in place. The response was negative. Given a July 28 launch date, first light for the instrument would be in the September 01 time frame, which makes an October field campaign an aggressive and optimistic bit of scheduling. Kurt Thome, et al., expect to go out to Railroad Playa in the October/November time frame, and Esaias is looking at an October date for a ship campaign, although there is concern that this is a bit risky given the cost of ship time. It was noted that Wan has surface temperature validation sites at Mono Lake

and Railroad Playa, and ASTER has surface temperature sites at Lake Tahoe etc., and Chinese scientists are working on a high lake in Tibet.

2.5 GDAAC Report

Kempler reviewed the GDAAC Notes for MODIS Technical Team Meeting dated 3/18/99 (Attachment 1). He reported a metadata consistency problem in PGE02 with ".met" files. He noted that the capability for ingesting DAO through ECS will not be in place at launch, and that GDAAC will provide a workaround.

2.6 SDST Report

Masuoka reported that software for PGE01 will be shipped to the DAAC on Friday, March 19 or Monday, March 22. Testing is underway to insure that the software handles error data.

This weekend, an orbit's worth of new-format L1B data will be generated in order to make sure that the readers work for this data format. It will be tested out on the cloud mask before delivering PGE03. A freeze on the number of algorithms will be put in place mid-April, due to the fact that readers for the new format L1B data are just coming out.

Masuoka reports that about half the planned hardware is currently in place. There is a need to do some operator training and to revise and shake out PGEs, as well as running production tests. Since it requires 2-4 days to run an 8-day product, a shorter "n" day test rather than a full 8-day test is planned, based on system resource availability.

King notes that 3-D interpolation is taking up close to 90% of his computer time, and that there appear to be no good commercial interpolators available. He is looking to other projects and teams to see if they have developed any solutions in-house that could be shared.

2.7 Data Report

Fleig reports that approximately 3 terabytes of synthetic data representing 7 days worth of L0-L1 data are available. NSIDC will be testing release 5a+ in June; this release may be ready for launch.

2.8 Instrument Report

Barnes noted that the PC drift problem had been solved, and attributed it to miswiring two pins on the MEM backplane. Fixing the wiring fixed the problem. The power supply shutoff problem is now understood; it is due to phase shifting vs. power level interactions. A modification that eliminates specific phase/power level combinations is being considered.

The screen has been replaced on the prototoflight instrument SDSM, and a new version of the flight software has been uploaded. There is still a question about closing doors when the spacecraft enters safe mode. The concern is that if the doors are closed, they may not open again. If the doors are left open, an inadvertent sun look should not cause a problem provided the scan mirror is turning—the image will sweep across the focal plane quickly and not harm the instrument.

Another response versus scan angle test will not be done on the protoflight instrument - it is not felt that there is anything to be gained from further tests. The strategy will be to use the transfer function for the fixed optics as measured on the FM1 instrument along with the reflectance measurements from witness samples of the protoflight instrument mirror to establish a set of values to use for the protoflight scan mirror to establish a set of values to use for the protoflight instrument. Differences exist between the PFM and FM1 scan mirror witness samples, which warrants against using FM1 scan mirror reflectance data for the PFM instrument characterization.

The pre-ship review for the Terra spacecraft will be held April 6–7, and it will be shipped April 17.

2.9 EOS Senior Project Scientist Report

King reports that Joe Senftle is now the manager of ECS. He noted that the EOS Science Plan is now out, having just come from the printer earlier in the day.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward

1. Barnes: Work with Wayne Esaias to complete the written and viewgraph versions of the Oceans Validation Plan.

2. Murphy: Create a mechanism for coordinating MODIS operations and other schedules that includes an interactive listing. It should be more than a passive posting of schedules on the World Wide Web. Such an interactive schedule could be used by MODIS science discipline teams to coordinate field campaigns or by the operations group to coordinate MODIS activities with the other Terra instruments' activities.

Status: This item remains open.

3. Murphy: Clarify the data release agreements between NASA and NOAA on MODIS data, including MODIS requirements and which of these requirements NOAA will accommodate. Discuss these items with Legg and Tarpley of NOAA.

Status: This item remains open. Draft MOU is being worked by Murphy, Tarpley, Legg, and Masuoka.

4. Conboy and Howard: Plan for the next MODIS Science Team meeting in May.

Status: This item remains open.

5. Heney and Howard: Develop a weekly MODIS news page linked to the MODIS home Web site. It should include hot items and reflect weekly progress.

Status: This item remains open.

6. Murphy: Follow up on the status of the PI Processing working agreement with ESDIS.

Status: This item remains open. The conveyance memo from SDDT's and Discipline leaders will be signed this week (the week of March 8–12).

7. Murphy: Investigate the status of direct broadcast and present an update to the Technical Team.

Status: This item remains open.

8. Murphy: Coordinate a MODIS approach for radiance-to-brightness temperature conversions.

Status: This action remains open.

9. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open.

10. Masuoka: Examine status of DAO ancillary products for MODIS.

Status: This item remains open.

3.3 Closed Action Items

1. Evans and Eicorn: Look into what can be done at Valley Forge without taking the instrument off the spacecraft.

Status: This item is closed. No feasible solution was found.

2. Conboy: Work with Murphy on a launch invitation list; invite PAO to participate.

Status: This item is closed. Conboy submitted the MODIS Terra Launch Invitation.

3. Guenther: Deliver a schedule for an earlier date on Level 1 code. In addition work on, if possible, a more modularized version of the Level 1B code to minimize any problems from forthcoming software changes.

Status: This item is closed. Guenther provided this schedule to an early January premeeting to the SDDT meeting held on January 13.